

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001241**Date Inspected:** 13-Nov-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Fu Yu Hong**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG and Tower Mock-up**Summary of Items Observed:**

CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the fabrication scheduled for this project at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

Item Description	WBS	Dwg No.	Status
1 Milling operation for bevel preparation The QA inspector observed that ZPMC was performing milling operations for the bevels at the 30 mm thick plate designated as X46-X46D.			
2 Floor beam subassembly welding verifications The QA inspector observed ZPMC performing welding operations with the flux cored welding (FCAW) process on the floor beam subassembly at the junction of the plates X49-X-49C and X48-X48C and X49-X49D. welder WiLiu Long Xian was welding in the flat(1G) position with the 1.4 mm diameter electrode designated as E71T-1 /AWS A5.20, brand name Supercored. The QA inspector observed the certified welding inspector (CWI) Zhang Zhong performing welding verifications. The QA inspector performed random verifications, the QA inspector found that welding operations appeared to be in accordance documents.			
3 A-58 and A 75 Interior splices welding ZPMC, welders Tao Quian and Zhan Jiang Zhou were observed by the QA Inspector performing welding operations on the internal splice panel A75 and A-58 (longitudinal stiffener to skin plate). Mr. Tao Quian was observed welding the weld joint 1A filler passes following the approved welding procedure specification WPS-B-T-2332-TC-U5-F. Base metal was designated as A-709 Grade 50. ZPMC was using the flux cored arc welding (FCAW) process in the flat (1G) position with the 1.4 mm diameter electrode designated as E71T-1 /AWS A5.20, brand name Supercored. The QA			

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inspector performed random verifications of the welding parameters after ZPMC approved Certified Welder Inspector Xu Lefeng. ZPMC welding operations appeared to be in general compliance with the contract documents.

Mr. Zhan Jiang Zhou was observed welding the weld joint 4-B filler passes following the approved welding procedure specification WPS-B-T-2332-TC-U5-F. Base metal was designated as A-709 Grade 50. ZPMC was using the flux cored arc welding (FCAW) process in the flat (1G) position with the 1.4 mm diameter electrode designated as E71T-1 /AWS A5.20, brand name Supercored. The QA inspector performed random verifications. The QA inspector found that welding operations appeared to be in general compliance with the contract documents.

4 OBG welding consumables

ABF representative Peter Ferguson stopped production while he was waiting for response from ZPMC. ABF and the QA inspector questioned the welding consumable used for tack weld the bottom plate splices PL 36A to 36B, PL 37A to PL 37B and side plates PL 63A and 63B (seismic performance critical members).

The QA inspector had a conversation with the ZPMC QC inspector Shen Xue Jun. Mr. Shen Xue Jun said to the QA inspector that ZPMC had the records with the welding consumables used in production in November, 10th. The QA inspector reviewed the records with the help of the translation from Caltrans Assistant Structures Material representative Chengwen Liu. The QA inspector observed that the ZPMC consumable control log had the tack welder name and the time when the new spool (15 Kilograms) left the electrodes storage. The QA inspector said to Mr. Shen Xue Jun that the electrodes used to tack weld the plate in question on 11/10/07 appeared in compliance with the contract documents. Mr. Shen Xue Jun explained to ABF representative as well. ABF agreed and allowed ZPMC to continue production activities on the splice plates mentioned above.

Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Acuna,Alfredo	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
